

The Examiner is requested to reconsider his rejection of Claim 11 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Claim 11 has been canceled.

The Examiner is requested to reconsider his rejection of Claims 5, 7, 9, 11, 14, 25 and 40 - 42 under 35 U.S.C. §112, second paragraph as failing to point out and distinctly claim the subject matter which applicant regards as the invention. Applicants have deleted any reference to the polymer being characterized as a "conjugated diene polymer." Applicants' matrix polymer is referred to in the instant claims as a "conjugated polymer."

Applicants have amended certain claims and canceled others in a good faith effort to eliminate compositions from the claims which are duplicative of the prior art cited.

The Examiner is requested to reconsider his rejection of Claims 1, 3-7, 9, 10, 14 -16, 20, 22 - 25 and 40 - 42 under 35 U.S.C. §102(b) as anticipated by, or in the alternative, under 35 U.S.C. §103(a) as obvious over Han (5,171,478).

In *In re Gately* the CAFC stated: "Of course to establish a prima facie case of Anticipation, the Office must show that the elements of that concept have been preliminarily established, i.e., the evidence, unless rebutted, must show that all of the elements of the claims in the application are set forth, either explicitly or inherently, in the allegedly anticipating prior art reference."

The Han invention comprises the step of heating neutral or electrically conductive polyaniline or a blend of polyaniline with other thermoplastic or thermosetting polymers for a time and at a temperature sufficient to increase the molecular weight of the polyaniline to the desired extent. In general, the longer the heating time and the higher the heating temperature the greater the increase in the molecular weight. Conversely, the shorter the heating times and the lower the heating temperatures, the smaller the increase in the molecular weight.

The objective of the Han invention is not to dope the polymer, but rather to increase its molecular weight. Han discloses that shorter heating times can be employed if the

polyaniline includes a "plasticizing agent" or if the heating step is carried out in the presence of such a "plasticizing agent." This is an important factor from the perspective of the "obviousness" rejection. Han is not processing a polyaniline to make it electrically conductive.

From a detailed reading of the Han reference, it is clear that Han does not disclose the three constituent blend of Applicants' invention. Han does disclose polyaniline and a plasticizer, but does not disclose a solvent, other than to use the word "solvent" at various locations throughout his specification. The Examiner has consistently cited Example 6 of Han which states in part:

"Green conductive poly(anilinium tosylate) powders (5 g) was prepared as in Example 3, and was suspended in 35 mL of N-methyl pyrrolidinone. After the addition of 3.3 g of tripropylamine, the suspended poly(anilinium tosylate) powder started to dissolve forming a blue solution of low viscosity (water-like viscosity)."

The "N-methyl pyrrolidinone" and "tripropylamine" cited in Example 6 are both "plasticizers." (See Han at Column 6, line 61 and Column 7, line 64 disclosing N-methyl pyrrolidinone and at Column 6, line 64 disclosing tripropylamine.) One infers from a proper reading of Example 6 that the two plasticizers disclosed provide a synergistic effect with respect to putting the poly(anilinium tosylate)- -which is a salt and not the polyaniline claimed by applicants- -into the plasticizer and forming a blend. Han has no specific disclosure as to the solvent used, if any. One cannot properly take the use of the disclosure of a "solvent" by Han as anticipatory because the reference to Cao cited by the Examiner (and discussed below) teaches at Table 1 that not all solvents are effective to dissolve polyaniline *per se*. Thus Han does not disclose each and every element as is required for a proper "anticipation" rejection.

Applicants are aware that it is the position of the USPTO that if constituents are present in a blend, the purpose for the presence of the constituent is immaterial. The USPTO presumes that the composition (blend), etc., inherently possesses all beneficial properties asserted to be associated with the constituent(s). But for Han to be anticipatory, it must possess the polymer, a plasticizer and a solvent of the present invention. It does not

possess all of the constituents of Applicants' composition and thus cannot possess the properties. Applicants' claims provide that the plasticizer and the solvent are not the same. Han defines his plasticizers but is silent as to useful solvents. There is no inherent disclosure of Applicants' invention in the Han reference. In their present form, Applicants' claims do not include plasticizers disclosed by Han.

Further, from the perspective of obviousness, there is no suggestion in Han to include certain named solvents, which are in composition, different from the plasticizers.

The Examiner is requested to reconsider his rejection of Claims 1, 3-7, 9, 10, 14 -16, 20, 22 - 25 and 40 - 42 under 35 U.S.C. §103(a) as obvious over Han (5,171,478) in view of Cao (5,232,631)

The description of the Han reference articulated above is hereby incorporated by reference herein for the purpose of responding to the obviousness rejection cited above. Cao discloses conductive polymers, and the use of functionalized protonic acids in a solvent to induce processibility of electrically conductive substituted or unsubstituted polyanilines.

In further support that the anticipation/obviousness rejection based upon Han in view of Cao is improper, Example 4 of the Cao reference discloses that not all solvents act effectively as polyaniline solvents. Cao discloses that with respect to a polyaniline-DBSA blend, toluene, 1,2,4-trichlorobenzene, chloroform, decalin and xylenes are effective solvents, whereas dimethylsulfoxide, dimethylacetamide, dimethylformamide and formic acid do not act as solvents.

Applicants' claims specifically recite the presence of specific polymers, specific plasticizer additives and specific solvents, wherein the "*said solvent being different from said additive.*" Han does disclose that *dimethyl sulfoxide, N,N- dimethylacetamide and N,N-dimethylformamide* are useful as plasticizers, but Cao, in his invention, does not use them as plasticizers. Rather, Cao discloses that as "solvents" these aforementioned

compounds are not effective. Han appears only to disclose H₂O as his solvent. (See Han, Examples 1 and 3. Example 3 provides the origin of the tosylate salt used in Example 6)

The skilled artisan reading Han with his two component system would not look to Cao with his three component system, as there is no suggestion in Han to look to a three component system.

Cao, at Column 16, line 49 to Column 17, line 39 discloses specific problems that may arise as a result of attempting to form an oriented film. Thus the skilled artisan would not use the Cao reference in combination with Han serving as the primary reference to render the instant invention obvious.

The Han reference and the Cao reference both relate to anilines. However, they are directed to different objectives. Han seeks to raise the molecular weight of an aniline polymer using a plasticizer. Han does not use a solvent as an integral part of the invention. Applicants require the presence of a solvent. Cao, on the other hand, relates to doping an aniline but does so using different plasticizers and solvents from those presently claimed by Applicants. The Han invention is restricted to the aniline compound in combination with a myriad of plasticizers. Han, in fact, does not disclose any specific information as to his solvent, if any, besides perfunctory references to water in his specification. (The Examiner is requested to take official notice of the solubility of organic polymers in water.) The teachings of Han and Cao are antithetical. Cao discloses aniline, plasticizer and solvent. Certain solvent compounds in Example 4 (above) that Cao discloses as not effective as solvents, are disclosed by Han to be effective plasticizers, but no mention is made as to their use as solvents that would provide a basis for anticipation or obviousness rejections.

As presently written, the claims of the instant invention are not anticipated by Han. Han does not disclose polymer, plasticizing additive and solvent. The Cao reference does establish that a three component composition is different in kind rather than degree from

the two component blend of Han. Thus there is no basis to combine the references. The elements found in Applicants' claims are not found in Han nor are they found in Cao.

There is no basis to combine Cao with Han. Applicants respectfully submit that all of the elements of the independent claims, such as those mentioned above are not and cannot reasonably be said to be present in the asserted combination of references cited by the Examiner in this case. All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

The failure of an asserted combination to teach or suggest each and every feature (element) of a claim remains fatal to an obviousness rejection under 35 U.S.C. § 103.

Section 2143.03 of the MPEP requires the "consideration" of every claim feature in an obviousness determination. To render the claims unpatentable, however, the Office must do more than merely "consider" each and every feature for this claim. Instead, the asserted combination of the patents to Han and Cao must also teach or suggest *each and every claim feature*. See *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974) (emphasis added) (to establish *prima facie* obviousness of a claimed invention, all the claim features must be taught or suggested by the prior art). In this case, the Examiner has considered only a portion of the elements recited in the claim. Indeed, as the Board of Patent Appeal and Interferences has confirmed, a proper obviousness determination requires that an Examiner make "a searching comparison of the claimed invention – *including all its limitations* – with the teaching of the prior art." See *In re Wada and Murphy*, Appeal 2007-3733, citing *In re Ochiai*, 71 F.3d 1565, 1572 (Fed. Cir. 1995) (emphasis in original). Further, the necessary presence of all claim features (elements) is axiomatic, since the Supreme Court has long held that obviousness is a question of law based on underlying factual inquiries, including ... ascertaining the differences between *the claimed invention* and the prior art. *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966) (emphasis added). Applicants submit that this is why Section 904 of the MPEP instructs Examiners to conduct an art search that covers "the invention as *described and claimed*." (emphasis added).

Lastly, Applicants respectfully direct attention to MPEP § 2143, the instructions of which buttress the conclusion that obviousness requires at least a suggestion of all of the features (elements) of a claim, since the Supreme Court in *KSR Int'l v. Teleflex Inc.* stated that "there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR Int'l v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

It remains well-settled law that obviousness requires at least a suggestion of all of the features in a claim. See *In re Wada and Murphy*, citing *CFMT, Inc. v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003) and *In re Royka*, 490 F.2d 981, 985 (CCPA 1974)).

In rejecting claims under 35 USC 103(a) the Examiner bears the initial burden of establishing a prima facie case of obviousness. *In re Oetiker* 977 F.2d 1443, 1445 (Fed. Cir. 1992). See also *In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir. 1984). It is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. See *In re Fine* 837 F.2d 1071, 1073 (Fed. Cir. 1988). In doing so, the Examiner is expected to make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966), and in addition, provide some "articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006, cited with approval in *KSR Int'l Co. v. Teleflex Inc.* 127 S.Ct 1727, 1741 (2007). Only if this initial burden is met, does the burden of coming forward with evidence or argument shift to Applicant. (*Oetiker*, 977 F.2d. at 145, and *Piasecki*, 745 F.2d at 1472.

The dependent claims are nonobvious under section 103 if the independent claim(s) from which they depend are nonobvious. *In re Fine* 837 F.2d 1071, 5 USPQ 2d 1596, (CAFC 1988) citing *Hartness Int'l, Inc. v. Simplimatic Eng'g Co.*, 819 F.2d 1100, 1108, 2 USPQ2d 1826, 1831 (Fed.Cir.1987); *In re Abele*, 684 F.2d 902, 910, 214 USPQ 682, 689 (CCPA 1982); see also *In re Sernaker*, 702 F.2d 989, 991, 217 USPQ 1, 3 (Fed.Cir.1983).

In order to analyze the propriety of the Examiner's rejections in this case, a review of the pertinent applicable law relating to 35 U.S.C. § 103 is warranted. Applicants submit that the Examiner has applied the Han and Cao references discussed above using a selective combination to render obvious the instant invention.

The Court of Appeals for the Federal Circuit has set guidelines governing such application of references. These guidelines are, as stated are found in *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143, 227 USPQ, 543, 551:

When prior art references require selective combination by the court to render obvious a subsequent invention, there must be some reason for the combination other than hindsight gleaned from the invention itself.

A representative case relying upon this rule of law is *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 USPQ 2d 1434 (Fed. Cir. 1988). The district court in *Uniroyal* found that a combination of various features from a plurality of prior art references suggested the claimed invention of the patent in suit. The Federal Circuit in its decision found that the district court did not show, however, that there was any teaching or suggestion in any of the references, or in the prior art as a whole, that would lead one with ordinary skill in the art to make the combination. The Federal Circuit opined:

Something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. [837 F.2d at 1051, 5 USPQ 2d at 1438, citing *Lindemann*, 730 F.2d 1452, 221 USPQ 481, 488 (Fed. Cir. 1984).]

The Examiner has described what the Han and Cao references teach, but has not stated what each does not teach alone or in combination. The Examiner has selected elements from Han and Cao for the sake of showing the individual elements without regard to the total teaching of the references. There is no suggestion that elements in Han are missing that would optionally make the invention more effective or efficient, or that the system disclosed therein needs to be improved upon, or could optionally be improved upon by adding some additional elements. The skilled artisan reading the laser technology in Han would comprehend that the disclosure was complete on its face.

Thus the Examiner in his application of the Han and Cao references is improperly picking and choosing. The rejection is a piecemeal construction of the invention. Such piecemeal reconstruction of the prior art patents in light of the instant disclosure is contrary to the requirements of 35 U.S.C. § 103.

The ever present question in cases within the ambit of 35 U.S.C. § 103 is whether the subject matter as a whole would have been obvious to one of ordinary skill in the art following the teachings of the prior art at the time the invention was made. It is impermissible within the framework of Section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. (Emphasis in original) *In re Wesslau* 147 U.S.P.Q. 391, 393 (CCPA 1965)

This holding succinctly summarizes the Examiner's application of references in this case, because the Examiner did in fact pick and choose so much of the Han and Cao references to support the rejections and did not cover completely in the Office Action the full scope of what these laser related references teach and/or fairly suggest to one skilled in the art.

Further, the Federal Circuit has stated that the Patent Office bears the burden of establishing obviousness. It held this burden can only be satisfied by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the reference.

Obviousness is tested by "what the combined teachings of the references would have suggested to those of ordinary skill in the art." *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). But it "cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination." *ACS Hosp. Sys.*, 732 F.2d at 1577, 221 USPQ at 933. [837 F.2d at 1075, 5 USPQ 2d at 1599.]

The court concluded its discussion of this issue by stating that teachings or references can be combined only if there is some suggestion or incentive to do so. There is no suggestion in the Han and Cao references that they could or should be combined.

It is respectfully submitted that the Examiner has not provided any "suggestion" from the cited art to Cao to modify the Han reference, nor is there any "motivation" from the cited

art to Han to combine the references. The Examiners has merely used hindsight as noted *supra*. Also there nothing in said prior art that would lead one of ordinary skill in the art to modify the existing art in the manner claimed by Applicants. Further as required by *In re Kahn* (*supra*) no "articulated reasoning with some rational underpinning to support the legal conclusion of 'obviousness' is provided to support the suggested modifications." As such, it is respectfully submitted a *prima facie* case for obviousness has not been made with respect to any of the claims. As all objections are believed obviated with this amendment, favorable action is respectfully requested.

Applicants summarize one of their positions with respect to the Examiner's rejections in this case by referring to the decision of the CAFC in *In re David H. Fine*, 837 F.2d 1071, 5 USPQ 2d 1596, (CAFC 1988), which held in pertinent part:

"...Obviousness is tested by "what the combined teachings of the references would have suggested to those of ordinary skill in the art." *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). But it "cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination." *ACS Hosp. Sys.*, 732 F.2d at 1577, 221 USPQ at 933. And 'teachings of references can be combined only if there is some suggestion or incentive to do so.' *Id.* Here, the prior art contains none.

Instead, the Examiner relies on hindsight in reaching his obviousness determination. But this court has said, "To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher." *W.L. Gore*, 721 F.2d at 1553, 220 USPQ at 312-13. It is essential that "the decisionmaker forget what he or she has been taught at trial about the claimed invention and cast the mind back to the time the invention was made ... to occupy the mind of one skilled in the art who is presented only with the references, and who is normally guided by the then-accepted wisdom in the art." *Id.* One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention..."

Applicants have cancelled Claims 9 and 40 – 42 and have substantially amended the substantive content of Claim 7 and claims dependent thereon, so the reference to Elsenbaumer need not be addressed as to Claims 7, 9, 14, 25, and 40 – 42. In the declaration that accompanied the filing of the instant application, the Applicants declared that they were the true inventors which included the truth and veracity of the contents of

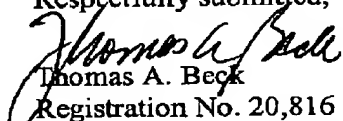
the application. The declaration as filed covers the Examples set forth in the specification as filed.

In view of the arguments and modifications to the claims, allowance of this case is warranted. If the Examiner wishes to discuss via telephone the substance of any of the proposed claim changes contained herein with the intent of putting them into an allowable form, Applicants' attorney will be glad to speak with him at a mutually agreeable time and will cooperate in any way possible.

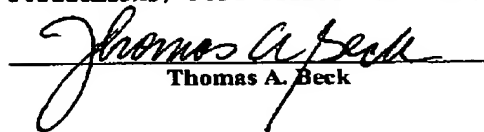
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I hereby certify that this amendment response is being telefaxed to (571) 273-8300 on the date indicated below addressed to Commissioner of Patents & Trademarks, Post Office Box 1450, Alexandria, VA 22313-1450


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